# Value Pricing Pilot Program Application Interstate Highway 10 Harris County, Texas

# Submitted To: United States Department of Transportation Federal Highway Administration

Submitted By:
Texas Department of Transportation
and
Harris County Toll Road Authority

December 21, 2001

# TABLE OF CONTENTS

EXE	ECUTIVE SUMMARY	
	cground	
Valu	ne Pricing Pilot Program Application	11
SEC	CTION 1 – INTRODUCTION	
1.1	Objective	
1.2	Project Background	
1.3	Current Project Status	1-2
SEC	CTION 2 – FACILITY IDENTIFICATION	
2.1	History	2-1
2.2	Condition	
2.3	Intensity	2-2
SEC	CTION 3 – METROPOLITAN PLANNING ORGANIZATION	
3.1	MPO Coordination	3-1
SEC	CTION 4 – FINANCIAL ANALYSIS	
4.1	Estimated Project Costs	4-1
4.2	Estimated Project Benefits	
4.3	Current Funding Sources and Available Funds	4-2
SEC	CTION 5 – FACILITY MANAGEMENT PLAN	
5.1	Implementation Plan	5-1
5.2	Finance Plan and Schedule	
5.3	Responsible Agency	
5.4	Operations and Maintenance Plan	
5.5	Monitoring and Evaluation	5-2
SEC'	TION 6 – USER IMPACTS	
6.1	Local	6-1
6.2	Transit	
6.3	Regional and Interstate	6-1

## **TABLE OF CONTENTS**

### SECTION 7 – ENVIRONMENTAL ANALYSIS

7.1	Final	l Environmental Impact Statement	7-1
7.2			
7.3	3 Historic, Cultural, Natural, or Recreational Resources		7-1
7.4	4 Economic or Community Resources		7-2
7.5	5 Safety and Liability		7-2
7.6			
7.7	Sens	itive Receptors	7-2
7.8		ority and Low-Income Populations	
<b>SEC</b> 8.1		8 – ADDITIONAL INFORMATION  Roads in Harris County	8-1
8.2		ly Toll Road	
8.3		er Toll Roads	
8.4		eements	
EXH	IBITS		
Exhil	oit A	Project Vicinity Map	
Evhil	sit D	Typical Section (IH 610 to SH 6)	

Exhibit A	Project Vicinity Map
Exhibit B	Typical Section (IH 610 to SH 6)
Exhibit C	Typical Section (West of SH 6)
Exhibit D	MPO Letter of Acknowledgement

The Texas Department of Transportation (TxDOT), in association with the Harris County Toll Road Authority (HCTRA), is applying to obtain the United States Department of Transportation's approval to operate variable priced lanes on a segment of Interstate Highway 10 (IH 10) in Harris County, Texas. This approval is requested under the program established by the Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21), Section 1216 – Innovative Surface Transportation Financing Methods, (a) Value Pricing Pilot Program.

#### **BACKGROUND**

TxDOT is currently in the Final Environmental Impact Statement (FEIS) approval process for the reconstruction of IH 10 from downtown Houston to FM 1489 (east of the Brazos River). This important project is vital to local, regional, and interstate travelers in that it will provide for a more stable flow of traffic though the area by reducing traffic congestion, improving safety conditions and enhancing mobility. Additionally, the reconstructed highway will enhance interstate commerce as the improved conditions provide relief for the increasing number of trucks resulting from the North American Free Trade Agreement. Construction plans are being prepared to reconstruct a 23-mile segment of IH 10 from IH 610 West in Houston to FM 1463 in Katy, Texas (*Exhibit A*).

The existing freeway consists of six general-purpose main lanes (three in each direction) from IH 610 West to FM 1463, with generally two-lane, continuous, one-way frontage roads in each direction. Additionally, the freeway has a one-lane reversible high occupancy vehicle lane operated by the Metropolitan Transit Authority (METRO) between IH 610 and State Highway 6 (SH 6) and one diamond lane in each direction between SH 6 and the Grand Parkway (State Highway 99).

The FEIS for the reconstruction of IH 10 identified multiple alternatives for improving the referenced highway segment. The preferred alternative includes eight general-purpose main lanes, four in each direction, with continuous three-lane frontage roads in each direction. In addition, between the general-purpose lanes from IH 610 West to SH 6, are managed lanes, two in each direction (*Exhibit B*). From SH 6 to the Grand Parkway, two managed lanes, one in each direction, are identified (*Exhibit C*).

#### VALUE PRICING PILOT PROGRAM APPLICATION

This Application is intended to secure approval under TEA-21 Section 1216(a) to operate the four managed lanes, from IH 610 West to SH 6, as variable priced lanes. The concrete median barrier between the variable priced lanes and the general-purpose lanes will be replaced with a vertical delineator, thereby creating a 24.25-foot-wide incident management area (*Exhibit B*). The toll revenues received from operation of the variable priced lanes will in turn be used for debt service, operation and maintenance of the freeway, and associated services until debt service is retired. United States Department of Transportation Value Pricing Pilot Program funding appropriations are not requested.

The variable priced lanes will fully utilize the available capacity through management operating strategies. The lanes will be operated in an uncongested state with the demand being controlled by the various options.

Justification to operate variable priced lanes on a segment of IH 10 is based on the following.

#### **Funding**

TxDOT has not secured the total funds required to complete this critical project. The MPO has allocated \$316 million of Federal Surface Transportation Program and Congestion Management Air Quality funds for this project. In August of 2001, the Texas Transportation Commission issued a minute order under which a total of \$519.3 million was advanced to a Priority 1 status. Priority 1 status allows TxDOT to proceed with project development. It does not commit construction funding of the project. TxDOT has also been able to allocate an additional \$117.3 million from local rehabilitation funds. In summary, TxDOT has allocated \$952.6 million of the \$1.2578 billion estimated to complete this project, leaving a shortfall of \$305.2 million.

HCTRA proposes to invest \$250 million, repayable from toll revenues, as its share of the construction cost. In addition, a 10-year interest free loan of \$250 million will be available to TxDOT.

#### **Facility Condition**

After more than three decades of service, the existing IH 10 facility has undergone an overwhelmingly increase in its use, which in turn has decreased the design life to a point that now warrants expedient reconstruction. The use of tolls for funding will allow TxDOT to accelerate the overall reconstruction schedule. Currently, most major elements of the freeway, such as lane widths, lack of inside shoulders, shoulder widths, sight distances, and weaving distances do not meet current TxDOT and American Association of State Highway and Transportation Officials (AASHTO) design standards. Yearly maintenance of the facility currently consumes \$5.35 million out of approximately \$98.5 million of total TxDOT Houston District's maintenance and rehabilitation funds. The maintenance cost per mile is approximately three times greater than the state average.

TxDOT's recent study of IH 10 indicates the annual average daily traffic exceeds 212,000 vehicles per day. Typical weekday traffic approaches 250,000 vehicles per day with over 16,000 trucks per day operating at a Level-of-Service F for more than 8 hours per day. The current facility has insufficient capacity to accommodate this demand, thereby reducing motorists' mobility and safety as evidenced by the high number of incidents and accidents. For example, the accident rate along this corridor in 1994 was 223 accidents per hundred million vehicle miles of travel, an alarming 33 percent higher than the statewide average for similar roadways.

#### **Implementation Plan**

The implementation plan takes into account the interest of not only local, but also regional and interstate travelers. Tolls will only be charged on the designated variable priced lanes of the expanded IH 10 facility. Tolls will not be charged to motorists traveling on the general-purpose lanes. Toll collection in the variable priced lanes will be fully electronic and will build upon the successful electronic collection program currently operated by HCTRA, referred to as E-Z Tag.

Mobility for local and regional travelers will be significantly enhanced by those using the variable priced lanes. The lanes will operate as express lanes through the congested West Houston area. As a result of users electing to travel in the variable priced lanes, capacity is added to the general-purpose

lanes, thereby increasing mobility for local, regional and interstate users of the free general-purpose lanes.

#### **Reconstruction Plan**

By leveraging the resources of TxDOT and HCTRA, the facility reconstruction plan becomes enhanced by allocating the necessary funds for reconstruction and accelerating the overall construction schedule. The funds saved in construction inflationary costs and user delay cost are estimated to be over \$300 million as a result of the program outlined in this application. Excluding accident costs and escalating maintenance costs, the savings is approximately 30 percent of the estimated construction costs.

#### **Public Toll Agency**

TxDOT is partnering with HCTRA for this facility reconstruction. HCTRA has demonstrated its capability to build, operate and maintain toll facilities that meet the criteria for the Interstate System. Starting in 1983 with the Hardy Toll Road, HCTRA has designed and built over 87 miles of toll facilities in Harris County. HCTRA is also in the planning, design and construction phases of additional facilities such as the Westpark Tollway and Beltway 8 Northeast Tollway.

#### **SECTION 1 – INTRODUCTION**

#### 1.1 **OBJECTIVE**

The objective of this Application is to obtain the United States Department of Transportation's approval to operate the four managed lanes proposed in the FEIS as variable priced lanes on a segment of IH 10 in Harris County, Texas. The limits of this segment, as shown in *Exhibit A*, are west of SH 6 to IH 610 West in Houston. This request is being made under the pilot program established by the Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21), Section 1216 – Innovative Surface Transportation Financing Methods, (a) Value Pricing Pilot Program.

#### 1.2 PROJECT BACKGROUND

In March 1995, TxDOT initiated a comprehensive transportation study of the 40-mile corridor along IH 10 West between downtown Houston and FM 1489 (east of the Brazos River). The study, referred to as the "Katy Freeway Corridor Major Investment Study" (MIS), was conducted under federal government guidelines outlined in the Intermodal Surface Transportation Efficiency Act of 1991. The Katy Freeway Corridor MIS was the cooperative effort of TxDOT and an interagency committee composed of representatives from the Metropolitan Planning Organization (MPO), Metropolitan Transit Authority (METRO), the Federal Highway Administration (FHWA), the Federal Transit Administration, the Texas Natural Resource Conservation Commission, and city and county representatives.

TxDOT's primary purpose for the reconstruction project is to upgrade the facility to current standards and increase operating capacity for the IH 10 corridor from IH 610 West to Katy, Texas. Operating conditions in this area currently exceed capacity level resulting in severe congestion and causing 8 to 9 million person-hours of delay each year. Reconstruction is needed to restore an aging pavement and bring the facility up to current standards and enhance operating conditions by providing a more stable flow of traffic through the area, reduce traffic congestion, reduce accidents, and improve interstate truck traffic. Reconstruction will optimize public safety and roadway efficiency.

#### 1.3 CURRENT PROJECT STATUS

The reconstruction plan identified in the *Final Environmental Impact Statement: IH 10 West from Taylor Street to FM 1489, August 2001*, is the result of the Katy Freeway MIS. The current FEIS design concept and scope is part of the currently conforming Metropolitan Transportation Plan (MTP) and Transportation Improvement Program (TIP).

The Record of Decision for this FEIS is anticipated by early 2002.

#### **SECTION 2 – FACILITY IDENTIFICATION**

#### 2.1 HISTORY

With the passage of legislation by Congress authorizing the interstate system in 1956, US 90 was designated as Interstate Highway 10 (IH 10) through Houston and Harris County. On the west side of Houston, IH 10 generally followed the existing U.S. Highway 90 (US 90) and the adjacent Missouri-Kansas-Texas Railroad through Harris County. Several modifications and improvements have been made along this facility since its construction in the 1960s.

#### 2.2 CONDITION

Between IH 610 West and FM 1463, the existing freeway can be characterized as having six general-purpose main lanes (three in each direction) from IH 610 West to FM 1463, with generally two-lane, continuous, one-way frontage roads in each direction and one reversible high occupancy vehicle lane between IH 610 and SH 6 and one diamond lane in each direction between SH 6 and Grand Parkway. In addition to several interchanges, two full freeway-to-freeway interchanges exist at IH 610 West and the Sam Houston Tollway. Several repairs, including asphaltic concrete pavement overlays, have been added to the original reinforced concrete pavement to improve ride quality and extend service life.

As a result of the facility's age, many elements of the freeway such as inside and outside shoulder widths do not meet current TxDOT and AASHTO design standards. After more than three decades of service, sections of this freeway have exceeded their design life. Consequently, over the recent years maintenance costs have significantly increased. Yearly maintenance of the facility now consumes \$5.35 million out of approximately \$98.5 million of the total TxDOT Houston District's maintenance and rehabilitation funds. The maintenance cost per mile is approximately three times greater than the State's average. Increased travel demand will further compound the current maintenance problem by accelerating roadway deterioration. In addition to costly maintenance, drainage improvements are required along the main lanes and frontage roads.

#### 2.3 INTENSITY

West Houston is one of the fastest growing population and employment areas in the metropolitan region. The 2000 census estimated Harris County's population to be more than 3.4 million. As stated in the FEIS, population and employment growth along the corridor in West Houston is projected to be in excess of 40 percent in the near future, with certain portions of the corridor experiencing population growth up to 130 percent. These growth projections indicate the corridor will experience significant travel demands in the future on a facility that is inadequate for todays demand.

TxDOT's recent study along IH 10 indicates the annual average daily traffic to be approximately 72,000 vehicles per day near Katy and over 212,000 vehicles per day closer to IH 610 West. Typical weekday traffic approaches 250,000 vehicles per day with over 16,000 trucks per day operating at a Level-of-Service F for more than 8 hours per day. The current facility has insufficient capacity to accommodate this many motorists, thereby reducing both mobility and safety, as evidenced by the high number of incidents and accidents. As described in the FEIS, the accident rate in 1994 was 223 accidents per hundred million vehicle miles of travel, an alarming 33 percent higher than the statewide average for similar roadways.

#### **SECTION 3 – METROPOLITAN PLANNING ORGANIZATION**

#### 3.1 MPO COORDINATION

The current FEIS design concept and scope, eight general purpose and four managed lanes, is part of the currently conforming Metropolitan Transportation Plan (MTP) and Transportation Improvement Program (TIP). On October 8, 2001, a Pilot Program Application status briefing was made to the IH 10 Katy Freeway Ad Hoc Committee of the Transportation Policy Council (TPC) for the Houston-Galveston Transportation Management Area. In addition, a copy of this Application has been sent to the Chairman of the TPC and a follow-up meeting conducted on December 13, 2001 with the Director of Transportation Planning of the MPO. A letter of acknowledgment from the MPO has been included (*Exhibit D*).

#### **SECTION 4 – FINANCIAL ANALYSIS**

#### 4.1 ESTIMATED PROJECT COSTS

TxDOT has prepared construction cost estimates for the 23 miles of IH 10 reconstruction from IH 610 West in Houston to FM 1463 in Katy. The estimated construction cost is approximately \$952.6 million in 2001 dollars.

Additionally, an estimated \$188.7 million is required for additional right-of-way acquisitions along the corridor and \$116.5 million for utility relocations throughout the project. As a result, the anticipated construction, right-of-way, and utility relocation costs for this reconstruction project total \$1.26 billion, excluding inflation.

#### 4.2 ESTIMATED PROJECT BENEFITS

Due to TxDOT's limited funding resources, the existing project development plan calls for construction of 2- or 3-mile segments along the corridor as funds become available. This reconstruction project is an ideal candidate for alternative funding under the pilot program. Funds from HCTRA could permit right-of-way acquisitions and utility relocations to begin immediately after obtaining environmental clearance. This would significantly reduce costly project delays by completing the project ahead of the current schedule.

An accelerated reconstruction schedule will provide several benefits to the traveling public and taxpayers. First, approximately 8 million to 9 million person-hours of travel time can be saved per year, with an associated cost of \$85 million per year. This represents a potential cost savings of \$300 million to \$350 million in user delay costs if the project schedule is accelerated.

Early completion will also save the cost of inflation on construction costs. On an estimated project cost of \$952.6 million, accelerated construction could reduce the inflationary impact by approximately \$65 million. Additionally, early right-of-way acquisition will avoid the certain cost escalation of property needed for the project. Property escalation is estimated to be about 5 to 6 percent annually.

The project delay costs identified above will exceed \$300 million if the project continues with the current funding approach. This represents more than 30 percent of the estimated construction costs. The program outlined within this application will allow this enormous expense to be minimized. It should also be noted that the estimated delay costs do not include accident costs or the additional maintenance costs.

#### 4.3 CURRENT FUNDING SOURCES AND AVAILABLE FUNDS

TxDOT has not secured the total funds required to complete this critical project. The MPO has allocated \$316 million of Federal Surface Transportation Program and Congestion Management Air Quality funds for this project. In August of 2001, the Texas Transportation Commission issued a minute order under which a total of \$519.3 million was advanced to a Priority 1 status. TxDOT has also allocated an additional \$117.3 million from local rehabilitation funds. This funding level represents a shortfall of \$305.2 million.

Under this application, HCTRA proposes to fund up to \$500 million in an effort to move this important project forward. HCTRA has committed \$250 million for the variable priced lanes and will make available an additional \$250 million to TxDOT to supplement the construction costs of the facility. TxDOT and HCTRA will enter into an agreement whereby TxDOT will reimburse HCTRA the amount advanced without interest. This reimbursement will be paid over a period not to exceed 10 years.

#### **SECTION 5 – FACILITY MANAGEMENT PLAN**

#### 5.1 IMPLEMENTATION PLAN

Tolls will only be charged on the designated variable priced lanes of the expanded IH 10 facility. Tolls will not be charged to motorists traveling on the general-purpose lanes. Toll collection in the variable priced lanes will be fully electronic and will build upon the successful, electronic toll collection program currently operated by HCTRA referred to as E-Z Tag. Only motorists equipped with valid E-Z Tag transponders will be permitted to use the variable priced lanes. No toll plazas will be constructed and no vehicles will be required to stop.

Toll rate levels are currently under study but are not expected to exceed an order of magnitude of approximately \$0.20 per mile. Depending on the results of the study, a form of variable toll pricing will be implemented. Motorists will be advised via message signing as to current toll rates prior to their entry into the variable priced lanes. Motorists will have the option of using the toll-free, general-purpose lanes. Tolls will be collected for a minimum of 10 years.

#### 5.2 FINANCE PLAN AND SCHEDULE

Based on a preliminary assessment, it appears that toll revenue potential in the projected first year of operation, 2007, would be in the range of \$20 to \$25 million. By the year 2020, this revenue is estimated to increase to a range of \$50 to \$60 million.

The \$250 million committed by HCTRA is currently available for this project. The \$250 million loan from HCTRA to TxDOT is also available when needed. The toll revenues received from operation of the variable priced lanes will be used for debt service and for operations, maintenance and associated services of the facility until debt service is retired.

#### 5.3 RESPONSIBLE AGENCY

TxDOT will be the responsible agency for the reconstruction of IH 10. Under the pilot program, HCTRA will support and assist TxDOT in the administration of the program. Annual monitoring and evaluation will be performed by HCTRA in cooperation with TxDOT.

#### 5.4 OPERATIONS AND MAINTENANCE PLAN

TxDOT and HCTRA will enter a joint agreement that stipulates use of a privatized asset management company to maintain the facility, including general purpose and variable priced lanes. TxDOT will be the lead agency in administering this contract. Under the agreement, TxDOT and HCTRA will each contribute a prorated amount to establish the necessary funds for operations and maintenance of the entire facility. HCTRA is currently using an asset management company for maintenance of their toll road system.

HCTRA will regularly certify to TxDOT that the variable priced lanes is being adequately maintained. TxDOT and HCTRA will, upon reasonable notice, make their respective records pertaining to the variable priced lanes subject to audit by the FHWA. The State will audit the variable priced lanes records for compliance with the provisions of the agreement and report the results thereof to FHWA.

#### 5.5 MONITORING AND EVALUATION

The project will develop reliable and realistic data collection procedures designed to monitor and track the progress of the project. Data to be collected might include: Traffic Counts, Vehicle Occupancy Counts, User/Non-user Surveys, cross-utilization of toll facilities.

### **SECTION 6 – USER IMPACTS**

#### 6.1 LOCAL

In addition to the new general purpose and frontage road lanes, the managed lanes will clearly provide more capacity for local trips than presently exists. The added continuous frontage roads in each direction will provide more capacity for local trips. The frontage roads will also indirectly add capacity to IH 10 for non-local trips since the frontage roads will be accommodating vehicles that otherwise would be on IH 10.

#### 6.2 TRANSIT

The variable priced lanes will fully utilize the available capacity through management operating strategies. The lanes will be operated in an uncongested state with the demand being controlled by the various options. The mobility of transit users will be significantly enhanced by providing the opportunity to operate in both directions of the facility all day, unlike the existing condition of the one-way, reversible lane. By providing added capacity in both directions, the variable priced lanes will be taking users off the general-purpose lanes and effectively providing added capacity for the driver who chooses to drive in the general-purpose lanes.

#### 6.3 REGIONAL AND INTERSTATE

Mobility for regional and interstate travelers will be significantly enhanced by those using the variable priced lanes. The lanes will operate as express lanes through the congested west Houston area. As a result of users electing to travel in the variable priced lanes, capacity is added to the general-purpose lanes, thereby increasing mobility for local, regional and interstate users of the general-purpose lanes.

Therefore, the use of variable pricing can be viewed as a means of accommodating far more capacity for local, regional, and interstate travel on IH 10 than currently exists, not for just variable priced lane users, but for all facility users. The added capacity that the project will provide should markedly improve travel for local, regional and interstate travelers along IH 10.

#### **SECTION 7 – ENVIRONMENTAL ANALYSIS**

#### 7.1 FINAL ENVIRONMENTAL IMPACT STATEMENT

A complete and thorough environmental analysis was performed for the reconstruction of IH 10 pursuant to Section 102(2)(C) of the National Environmental Policy Act of 1969, 42 U.S.C. §4332(2)(C), and the regulations of the Council on Environmental Quality (40 CFR Parts 1500-1508). The details of the analysis are presented in the *Final Environmental Impact Statement: IH-10 West from Taylor Street to FM 1489, August, 2001.* A Record of Decision for this FEIS is expected by early 2002. Using variable pricing will not produce any significant adverse environmental impacts or change the scope of the FEIS. Upon approval of this Application, TxDOT will prepare appropriate National Environmental Policy Act (NEPA) documentation for FHWA acceptance in accordance with the detailed proposal requirements of the Value Pricing Pilot Program.

#### 7.2 CURRENT OR PLANNED LAND USES

The proposed variable priced lanes will not require acquisition of additional right-of-way other than what is already proposed in the FEIS. Managed lanes currently proposed for the IH 10 widening project will be used as variable priced lanes. No additional construction is proposed for the variable priced lanes. Lanes will be monitored electronically; therefore, toll booths will not be required. Sufficient space for enforcement areas exists. There will be no impact to current or planned land uses as a result of the imposition of tolls.

#### 7.3 HISTORIC, CULTURAL, NATURAL, OR RECREATIONAL RESOURCES

Because the proposed variable priced lanes project will not require additional right-of-way, there will be no impact to historic, cultural, natural or recreational resources. Use of variable priced lanes will not change travel destinations since free general-purpose lanes are available and, therefore, will not change use of recreational resources in the project area. The imposition of tolls will not impact these resources.

#### 7.4 ECONOMIC OR COMMUNITY RESOURCES

The project will positively impact economic and community resources by providing continuous revenue that will be used to maintain the facility. In addition, by utilizing toll revenues for this project, construction of other future projects in the Houston region dependent upon transportation funding may be advanced.

#### 7.5 SAFETY AND LIABILITY

Use of toll funding for the reconstruction project will shorten the current schedule by several years. This will improve both safety and quality of life in west Houston and surrounding areas because the facility will improve current and projected traffic flow. The use of variable priced lanes will not adversely impact traffic safety. Existing toll roads in the Houston area have proven to be safe, effective traffic facilities.

#### 7.6 AMBIENT LIGHT, NOISE, AND AIR QUALITY LEVELS

No additional lighting is proposed as part of the variable priced lane project; therefore, there will be no impact to ambient light. Noise impacts were determined for reconstruction of IH 10 including the managed lanes. It is not anticipated that noise levels will increase in the project area as a result of placing tolls on these lanes. The proposed project will not adversely impact air quality. The MPO has certified the proposed project is included in the regional Metropolitan Transportation Plan and conforms to the State Implementation Plan (SIP). The reduction in construction time will eliminate stop-and-go traffic conditions ahead of schedule thereby reducing emissions.

#### 7.7 SENSITIVE RECEPTORS

Noise sensitive receptors are located throughout the project area. Because no additional construction is proposed, and no significant change in mobility (traffic movement) is anticipated, there would be no adverse impact to these receptors.

#### 7.8 MINORITY AND LOW-INCOME POPULATIONS

Because additional right-of-way is not required for the variable priced lane project and no additional construction is proposed, there will be no impact from construction or land acquisition on minority and low-income populations.

There is no data on the percentage of minority and low-income persons anticipated to use this roadway, with or without variable priced lanes. However, no adverse impact to any population is anticipated from the imposition of tolls since there will be generally four variable priced lanes and eight general purpose (free) lanes on the facility from which users can choose.

#### **SECTION 8 – ADDITIONAL INFORMATION**

#### 8.1 TOLL ROADS IN HARRIS COUNTY

During the 1970s and early 1980s, it became difficult for public agencies to maintain mobility in Houston and Harris County due to increasing population and traffic coupled with limitations on statewide funding. Responding to this dilemma, Harris County created Harris County Toll Road Authority (HCTRA) in 1983 to build and operate toll roads to complement the existing freeways and major thoroughfares.

#### 8.2 HARDY TOLL ROAD

The first bond election for \$900 million to finance a toll road system in Harris County was held in September 1983. The voters approved the issue, and the first project was the Hardy Toll Road from IH 610 North to IH 45 North at Spring Creek and the Montgomery County Line (a distance of about 22 miles).

Engineering on the Hardy Toll Road was commenced in the fourth quarter of 1983. The first construction contract was let in April of 1984. The entire project was opened to traffic in the second half of 1988. The Hardy Toll Road was constructed on both existing and new locations utilizing the existing Hardy Road as frontage roads.

The Hardy Toll Road project was the beginning of the partnership between HCTRA and TxDOT for the development of toll road projects. With few exceptions, TxDOT developed and funded the directional interchanges on TxDOT's system that were required for the toll projects. As an example, the directional interchanges at each end of the Hardy Toll Road at IH 45 and IH 610 at its northern and southern terminals, respectively, were funded and constructed by TxDOT.

#### 8.3 OTHER TOLL ROADS

Following the opening of the Hardy Toll Road, other toll roads were established. HCTRA utilized TxDOT's right-of-way to construct Beltway 8 West from IH 45 North to US 59 South (28 miles). This segment is known as the Sam Houston Tollway. HCTRA purchased additional right-of-way along this segment for the construction of TxDOT's frontage roads.

In 1994, HCTRA took over the operation and maintenance of the Houston Ship Channel Bridge. The bridge was originally constructed and operated by the Texas Turnpike Authority. The limits of the project were from SH 225 on the south to IH 10 East on the north (4 miles in length).

The next toll road segment to be constructed was Beltway 8 East from SH 225 to IH 45 South (about 8.5 miles). This segment was opened to traffic in July 1996. The next section to be completed was Beltway 8 South from IH 45 South to US 59 South (a distance of about 23.0 miles).

Most recently, HCTRA constructed the Hardy Connector (1.2 miles) from Hardy Toll Road to Waverly Drive in a joint project with the City of Houston's aviation's department to provide direct ACCESS to George Bush Intercontinental Airport from the toll road.

HCTRA is currently in the design and/or construction phases of the Westpark Tollway from IH 610 to SH 6 (11 miles) and Beltway 8 Northeast from US 59 to US 90 (13 miles).

A summary of HCTRA's toll road system to date is as follows:

Toll Road	Limits	Length (miles)
Hardy Toll Road	IH 610 North to IH 45 North	22.0
Beltway 8 West and North	IH 45 North to US 59 South	28.0
Houston Ship Channel Bridge	SH 225 to IH 10 East	4.0
Beltway 8 East	SH 225 to IH 45 South	9.0
Beltway 8 South	IH 45 South to US 59 South	23.0
Hardy Connector	Hardy Toll Road to Waverly Dr.	1.2
Westpark Toll Road (Under Construction)	IH 610 West to SH 6	11.0
Beltway 8 Northeast (In Design)	US 59 East to US 90	13.0
Total Mileage		111.2

With almost 20 years of experience and more than 87 miles of toll roads in operation in Harris County, it is evident HCTRA, in conjunction with TxDOT, can successfully design, build, operate, and maintain safe toll facilities.

#### 8.4 AGREEMENTS

TxDOT, HCTRA and FHWA will, upon approval of this Application, enter into a tri-party funding agreement. This agreement, similar to the current agreement for other toll roads in Harris County, will describe the roles and responsibilities of each party. Additionally, TxDOT and HCTRA will enter into a Design, Construction, Operation, and Maintenance Agreement for the reconstruction and operation of IH 10. This agreement will be similar to several previously executed agreements between TxDOT and HCTRA for toll roads constructed and operated within State right-of-way.